



Consulting Engineers & Environmental Scientists

303 Irene Street
Helena, MT 59601
Tel 406.443.5210
Fax 406.449.3729

June 30, 2006

Mr. Stan Sternberg
Montana Department of Transportation
Environmental Services Bureau
2701 Prospect Avenue
P.O. Box 201001
Helena, Montana 59620-1001

**RE: Sampling and Analysis Plan for Potentially Asbestos-Containing Soil in MDT Rights of Way, Traction Sand and Road Aggregate Sources, Collected Road Sweepings, and Sweeper Emissions
Libby, Montana
Task Order No. 605**

Dear Mr. Sternberg:

The Montana Department of Transportation (MDT) requested this work in their letter to Mr. Aaron Shewman dated April 8, 2006 (MDT, 2006a). In response, Maxim prepared a work plan dated May 22, 2006 (Maxim, 2006), which was approved by the MDT in their letter to Mr. Aaron Shewman dated May 26, 2006 (MDT, 2006b). In accordance with the work plan, Maxim developed this sampling and analysis plan (SAP) that outlines the methods for determining sample locations and procedures for sampling potentially asbestos-containing soil in the Libby area as well as aerosol dust emissions resulting from road sweeping operations. Figures referenced in this SAP are contained in Attachment A, soil and air sampling field forms are contained in Attachment B, applicable Libby Area standard operating procedures are contained in Attachment C, and references are listed in Attachment D.

The first step in the SAP involves preparing a site-specific health and safety plan (HASP) for Maxim personnel conducting the sampling. The HASP will be prepared in accordance with Occupational Safety and Health Administration (OSHA) requirements. As part of these requirements, all personnel on-site during the sampling of potentially asbestos-containing soil must have, at a minimum, 24 hours of OSHA Hazardous Waste Operation and Emergency Response (HAZWOPER) training. All Maxim personnel on-site conducting the sampling will also have asbestos inspector training and be accredited by the State of Montana Department of Environmental Quality (MDEQ) Asbestos Control Program. Maxim will ensure that HAZWOPER training and asbestos inspector requirements, including respirator fit-testing and medical surveillance, have adequately been met for all on-site Maxim personnel. Included in the HASP will be provisions for personal protective equipment (PPE), traffic control, and other non-asbestos hazards that may be encountered during the course of the project.

RECEIVED**JUL 03 2006****ENVIRONMENTAL**

Soil Sampling Locations

Soil samples will be collected from MDT Rights of Way (ROWs), selected and accessible sources (pits/stockpiles) for traction sand and road aggregate, surface soil at the MDT Libby Maintenance Section Facility, and road sweepings piles from two road sweepers.

For soil sample locations along MDT ROWs, Maxim field personnel will adhere to the following procedure:

1. Soil samples will be collected within 10-feet of the highway or pavement boundary at approximately 0.25 mile intervals along both sides of selected ROWs within an approximate 5-mile radius of the Town of Libby. The following MDT ROWs will be sampled (Figure 1):
 - US 2 (N-1), milepost (MP) 28.0 through 38.0
 - S-567, MP 0.0 through 4.5
 - S-482, MP 0.0 through 2.5
 - S-260, MP 0.0 through 4.0
 - MT 37 (P-33), MP 0.0 through 5.5 (one-mile intervals instead of 0.25 mile intervals at duplicate locations as those identified in CDM, 2006)
 - MT 37 (P-33), MP 5.5 through 9.5 (0.25 mile intervals)
2. For soil sample locations at each of the 17 traction sand and road aggregate source pits/stockpiles selected by MDT (Figure 2), Maxim field personnel will adhere to the following procedure:
 - A minimum of two soil samples from random locations will be collected from each of the pit/stockpile locations
3. Ten soil samples will be collected from the MDT Libby Maintenance Section facility. The ten sample locations will be selected in an approximate grid fashion on 50 foot centers to best represent the entire facility (Figure 3). Each sample location will be marked in the field on the facility map, the location of existing site features will be confirmed, and if features are missing, they will be located relative to either of the two existing site buildings using a measuring wheel
4. Two soil samples from random locations will be collected from up to four of the sweepings piles deposited by two Libby facility sweepers operating in the following two areas:
 - US 2 and MT 37 within the Town of Libby limits
 - MT 37 from the Kootenai River Bridge to the Rainy Creek Road turnoff

The correct sweeping pile locations will be identified by local MDT maintenance personnel.

Soil Sampling Procedure

Soil samples will be collected from MDT ROWs, selected and accessible traction sand and road aggregate source pits/stockpiles, from the MDT Libby Maintenance Section Facility, and road sweepings from two road sweepers. All sample analysis will be conducted in accordance with the procedures outlined in SOP SRC-LIBBY-03 (Revision 1).

For the collection of soil samples, Maxim field personnel will adhere to the following procedure:

1. Perform all sampling activities during daylight hours
2. Determine sample location as described above
3. Identify all hazards associated with the sample location and implement appropriate safety and required traffic controls
4. Don appropriate PPE including a half-face negative pressure respirator equipped with P100 filters, nitrile sampling gloves, and a fluorescent green road-hazard vest equipped with reflective striping
5. Collect soil samples:
 - ROWs: Collect and composite three sub-samples at each sample location. Collect sub samples from the zero (0) to six (6) inch depth: one at the sample location and one from locations 100 feet in opposite directions from the original sub sample location. Mix the three sub samples together in a stainless steel bowl and composite them into one sample. Install a labeled, 12-inch wooden stake at the sample location
 - Sand and aggregate source pits/stockpiles: Collect grab samples at each of the two random sample locations. Collect samples from the zero (0) to six (6) inch depth. Install a labeled, 12-inch wooden stake at each sample location
 - MDT Libby Maintenance Section Facility: Collect grab samples at each of the 10 locations described above. Collect samples from the zero (0) to six (6) inch depth. Install a labeled, 12-inch wooden stake at each sample location
 - Road sand sweepings: Collect grab samples at each of the two random sample locations selected for each sweepings pile. Collect samples from the zero (0) to six (6) inch depth. Install a labeled, 12-inch wooden stake at each sample location
6. Mark the approximate location of each sample on an orthophoto-based field map showing the project area on one-inch equal to one-mile scale
7. Document the location of each sample with a digital photograph and a resource-grade global positioning system (GPS) and record the photo number(s) and GPS point on the field form
8. Record on the field sampling form the presence of any visible vermiculite in the sample/sampling area

Air Sampling Procedure

Air samples will be collected from MDT sweepers during normal work activities and tasks. For the collection of air samples, Maxim personnel will adhere to the following procedure:

1. Determine the sweeper type (vacuum or broom) and sample location on the sweeper
2. Record the sampling route (US 2 or MT 37 within the Town of Libby limits, or MT 37 from the Kootenai River Bridge to the Rainy Creek Road turnoff)), sweeper type, location of the pump on the sweeper, and sample pump number on the air sample collection form
3. Calibrate the sampling pump to approximately 3.0 liters per minute. Record the initial calibration readings on the air sample collection form
4. Label the sample cassette with a unique sample number

- Air sample numbering will use the following format:

DATE-SAMPLER'S INITIALS-SWEEPER TYPE-LOCATION ON SWEEPER-ROUTE-
SEQUENTIAL SAMPLE NUMBER

As an example, for an air sample that was collected on June 14, 2006, by Ryan C. Behrends from the right side of the broom sweeper as it traveled along US 2 within the Town of Libby limits, the sample number would be:

061406-RCB-BROOM-RIGHT-US2LIBBY-1

The sequential number will increase with each sample collected.

5. Place the sample cassette in the sampling train. Record the sample start time on the air sample collection form. Note that times should be recorded in 24-hour format
6. Document the sample number on the field form and chain-of-custody
7. Following the conclusion of the 4-hour air sampling shift, remove the sampling cassette from the sampling train and immediately cap the cassette
8. Document the sample stop time on the air sample collection form
9. Perform post-sampling pump calibration and document the post-sampling calibration readings on the air sample collection form
10. Place the samples, sealed in a labeled plastic bag, into a suitable container for transport to the laboratory. Ensure the transport container, such as a cooler, will protect the samples from damage and allow easy handling

Mr. Stan Sternberg

June 30, 2006

Page 6 of 6

11. Submit the samples, following chain of custody (COC) protocol, for Transmission Electron Microscopy (TEM) analysis for LA Asbestos using the National Institute of Occupational Safety and Health (NIOSH) Method 7402. On the COC, request the lab store the samples indefinitely

12. Retain a copy of the chain-of-custody for the file

Upon your approval of this SAP, we will proceed with the sampling portion of the project. The sampling portion of the project is tentatively scheduled to begin July 10th, 2006, and continue for approximately two weeks. If you have any questions or comments, or if we can be of help in any other way, please feel free to call me in Helena (406.443.5210) or Ryan Behrends in our Billings office (406.248.9161).

Respectfully Submitted,



Aaron Shewman, P.E.
Project Coordinator



Ryan C. Behrends
Environmental Scientist

Attachments: A Figures
B Soil and Air Sampling Field Forms
C Applicable Libby Area Standard Operating Procedure
D References



Montana Department of Transportation

Brian S. Goodman
Solid/Hazardous Waste Specialist
Environmental Services

Office: (406) 444-7632
Fax: (406) 444-7245
Cellular: (406) 459-0210
Home: (406) 449-9982
E-mail: bgoodman@mt.gov

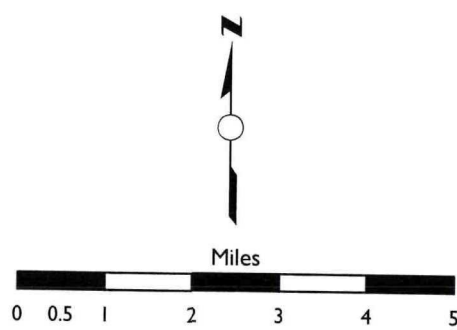
2701 Prospect Avenue
PO Box 201001
Helena, MT 59620-1001
TTY: (800) 335-7592
www.mdt.mt.gov

ATTACHMENT A
FIGURES



Legend

- Milepost (MP)
- U.S. Highway
- State & Secondary Highway
- 5 Mile Radius

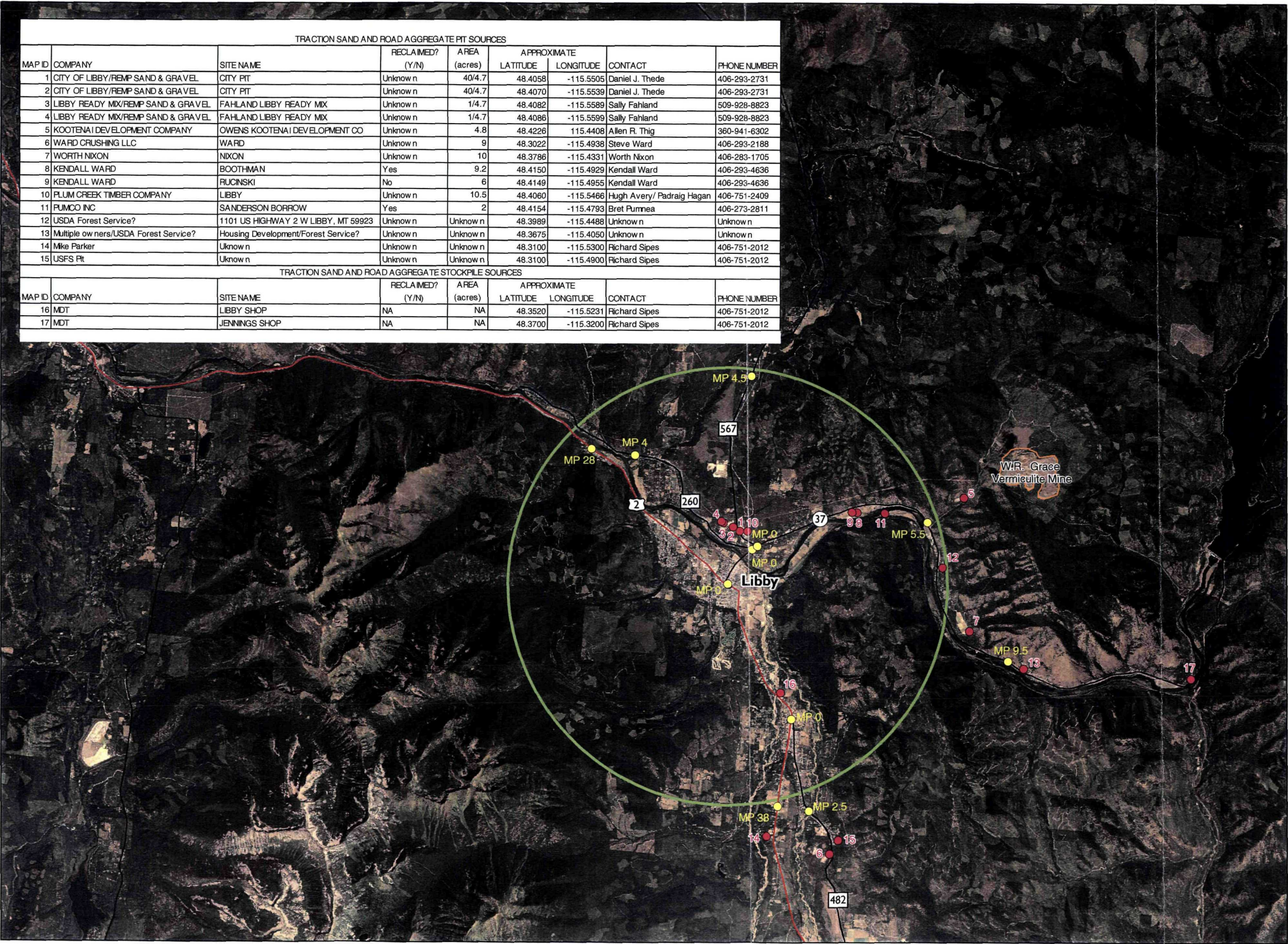


Sources: Milepost data from Montana Department of Transportation, Route data from Montana NRIS

Figure 1
Location Map
Sampling and Analysis Plan
Libby, Montana

TRACTION SAND AND ROAD AGGREGATE PIT SOURCES								
MAP ID	COMPANY	SITE NAME	RECLAIMED? (Y/N)	AREA (acres)	APPROXIMATE		CONTACT	PHONE NUMBER
					LATITUDE	LONGITUDE		
1	CITY OF LIBBY/REMP SAND & GRAVEL	CITY PIT	Unknown	40/4.7	48.4058	-115.5505	Daniel J. Thede	406-293-2731
2	CITY OF LIBBY/REMP SAND & GRAVEL	CITY PIT	Unknown	40/4.7	48.4070	-115.5539	Daniel J. Thede	406-293-2731
3	LIBBY READY MIX/REMP SAND & GRAVEL	FAHLAND LIBBY READY MIX	Unknown	1/4.7	48.4082	-115.5589	Sally Fahland	509-928-8823
4	LIBBY READY MIX/REMP SAND & GRAVEL	FAHLAND LIBBY READY MIX	Unknown	1/4.7	48.4086	-115.5599	Sally Fahland	509-928-8823
5	KOOTENAI DEVELOPMENT COMPANY	OWENS KOOTENAI DEVELOPMENT CO	Unknown	4.8	48.4226	-115.4408	Allen R. Thig	360-941-6302
6	WARD CRUSHING LLC	WARD	Unknown	9	48.3022	-115.4938	Steve Ward	406-293-2188
7	WORTH NIXON	NIXON	Unknown	10	48.3786	-115.4331	Worth Nixon	406-283-1705
8	KENDALL WARD	BOOTHMAN	Yes	9.2	48.4150	-115.4929	Kendall Ward	406-293-4636
9	KENDALL WARD	RUCINSKI	No	6	48.4149	-115.4955	Kendall Ward	406-293-4636
10	FLUM CREEK TIMBER COMPANY	LIBBY	Unknown	10.5	48.4060	-115.5466	Hugh Avery/ Padraig Hagan	406-751-2409
11	PUMCO INC	SANDERSON BORROW	Yes	2	48.4154	-115.4793	Bret Pumnea	406-273-2811
12	USDA Forest Service?	1101 US HIGHWAY 2 W LIBBY, MT 59923	Unknown	Unknown	48.3989	-115.4488	Unknown	Unknown
13	Multiple owners/USDA Forest Service?	Housing Development/Forest Service?	Unknown	Unknown	48.3675	-115.4050	Unknown	Unknown
14	Mike Parker	Unknown	Unknown	Unknown	48.3100	-115.5300	Richard Sipes	406-751-2012
15	USFS Pit	Unknown	Unknown	Unknown	48.3100	-115.4900	Richard Sipes	406-751-2012

TRACTION SAND AND ROAD AGGREGATE STOCKPILE SOURCES								
MAP ID	COMPANY	SITE NAME	RECLAIMED? (Y/N)	AREA (acres)	APPROXIMATE		CONTACT	PHONE NUMBER
					LATITUDE	LONGITUDE		
16	MDT	LIBBY SHOP	NA	NA	48.3520	-115.5231	Richard Sipes	406-751-2012
17	MDT	JENNINGS SHOP	NA	NA	48.3700	-115.3200	Richard Sipes	406-751-2012



Legend

Milepost (MP)

Traction Sand and Gravel

Aggregate Pit/

Stockpile Sources

U.S. Highway

State & Secondary

Highway

5 Mile Radius

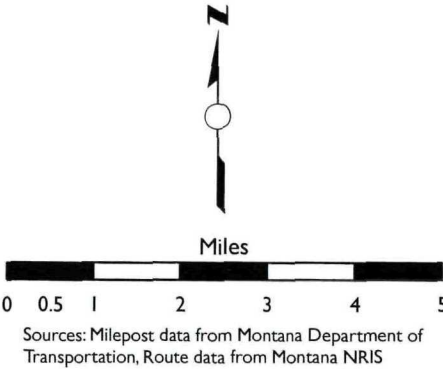
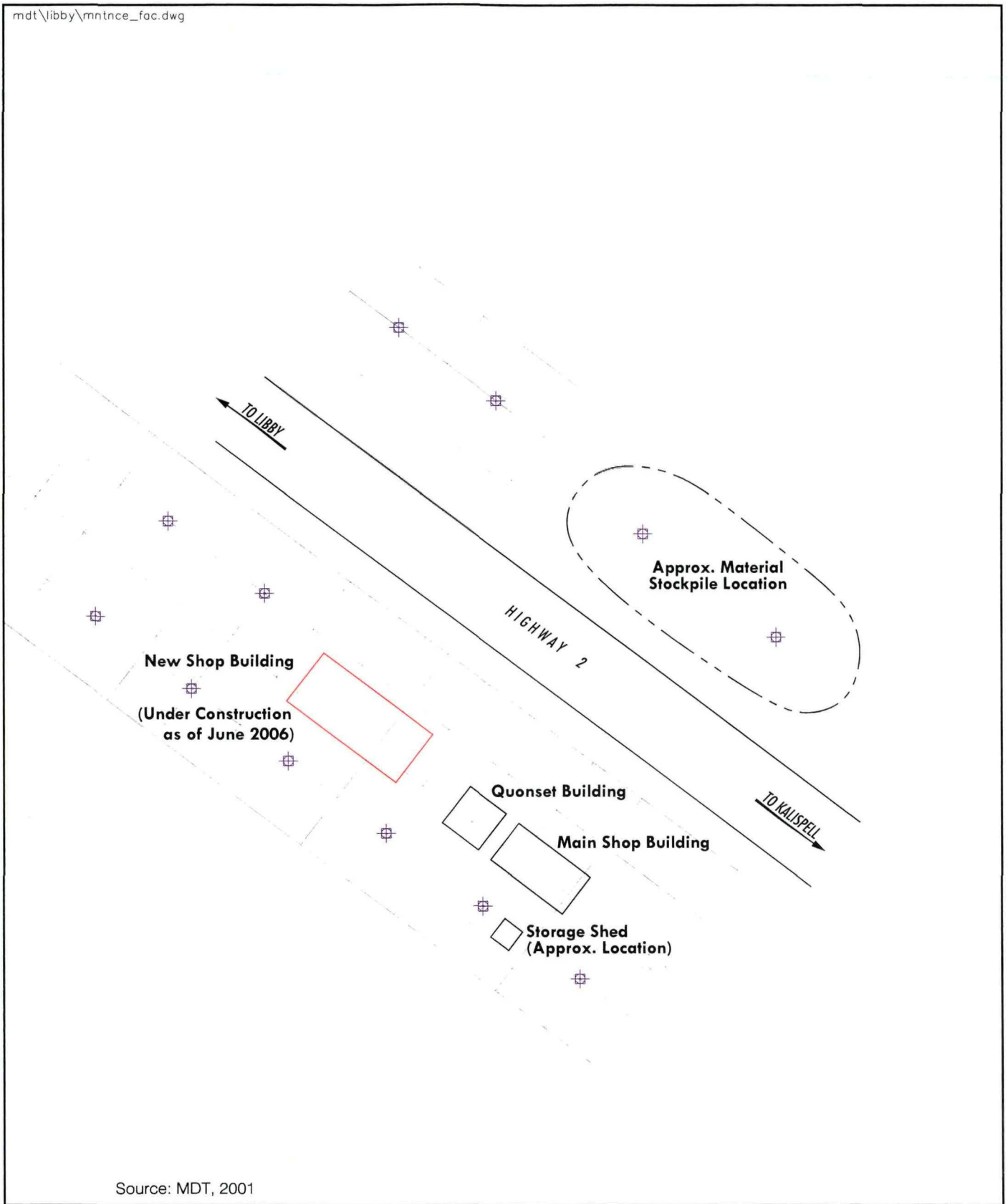


Figure 2
Soil Sample Location Map
Sampling and Analysis Plan
Libby, Montana

MAXIM Technologies


A DIVISION OF TETRA TECH, INC.



0 Feet 100

MAXIM
TECHNOLOGIES

6561296.100

 Proposed Soil Sample Location
(Approximate)

Site Map
Libby Maintenance Section Facility
Libby, Montana
FIGURE 3

ATTACHMENT B
SOIL AND AIR SAMPLING FIELD FORMS

ASBESTOS SOIL SAMPLING FORM

Project Name: MDT Libby Soil Sampling **Project Number:** _____

Inspector(s): _____ **Sampling Date:** _____

Facility/Building/Area: _____ **Sheet:** _____ **OF** _____

Please refer to the Sampling and Analysis Plan (SAP) for selection of sample location and soil sampling procedures.

SAMPLE NO.	DATE/TIME (DD/MM/YR)	HIGHWAY/ LOCATION	SIDE OF ROAD (N, S, E, W)	MILEPOST (To nearest 0.25)	DIGITAL PHOTO NUMBER	GPS READING (To four decimal places)		VERMICULITE PRESENT VISUALLY? (Yes/No)	VEG COVER (%)	SOIL TYPE (Topsoil/Sand/ Gravel, etc.)	COMMENTS
						Latitude	Longitude				

AIR SAMPLE COLLECTION

Project: MDT Libby Air Sampling	Date:
Building:	Calibration Instrument:
Location:	Technician:
Job No.:	Checked By:

Please refer to the Sampling and Analysis Plan (SAP) for selection of sample location and sampling procedures

Sample Number	Sample Description And Location	Pump ID	Start Time	Stop Time	Total Minutes	PRECALIBRATION			PRE Average Flow	POST CALIBRATION			POST Average Flow	Volume (liters)
						Test 1	Test 2	Test 3		Test 1	Test 2	Test 3		

ATTACHMENT C
APPLICABLE LIBBY AREA STANDARD OPERATING PROCEDURE

Date: May 20, 2003

SOP No. SRC-LIBBY-01 (Revision 1)

Title: QUALITATIVE ESTIMATION OF ASBESTOS IN COARSE SOIL BY VISUAL EXAMINATION USING STEREOMICROSCOPY AND POLARIZED LIGHT MICROSCOPY

Author Sally M. L. Gibson

Syracuse Research Corporation

SYNOPSIS: A standardized method is described for the examination of the coarse fraction (>1/4") of soil samples using stereomicroscopy and polarized light microscopy (PLM) to identify, segregate, and estimate the mass percent of asbestos in the sample matrix.

Received by QA Unit:

APPROVALS:

TEAM MEMBER

SIGNATURE/TITLE

DATE

EPA Region 8

[Signature]

5/20/03

Syracuse Research Corp.

[Signature]

5/20/03

Revision	Date	Reason for Revision
0	11/12/02	--
1	05/20/03	Provided clarification on dealing with very small particles.

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide a standardized screening method for the visual examination of the coarse fraction of previously sieved soil samples for evidence of asbestos mineral content using stereomicroscopy with confirmation of asbestos content by polarized light microscopy (PLM). This SOP incorporates salient components of EPA Test Method 600/R-93/116 *Method for Determination of Asbestos in Bulk Building Materials* and National Institute of Occupational Safety and Health (NIOSH) Method 9002 *Asbestos (bulk) by PLM*, Issue 2.

This procedure will be used by employees of contractors/subcontractors supporting USEPA Region 8 projects and tasks for the Libby, Montana, site. Deviations from the procedure outlined in this document must be approved by the USEPA Region 8 Remedial Project Manager or Regional Chemist prior to initiation of sample analysis.

2.0 PREREQUISITE TRAINING

Visual examination will be performed according to this SOP by a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and by analysts proficient either by education or experience in asbestos mineral identification by stereomicroscopy and PLM. Analyst familiarity with the procedural applications prescribed in EPA Test Method 600/R-93/116 and NIOSH Method 9002 is required.

Training as described in the Sampling and Analysis Plan, Remedial Investigation, Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4, (CSS SQAPP [CDM 2002]) will be provided to laboratory personnel or laboratories with less than one year of project-specific experience by "mentors" from either Reservoir Environmental Services, Inc. or EMSL.

3.0 RESPONSIBILITIES

The CDM Laboratory Coordinator (LC) is responsible for overseeing the activities of the CDM Soil Preparation Laboratory and subcontracted laboratories performing sample analysis for the Libby, Montana, project. The LC is also responsible for checking all work performed and verifying that the work satisfies the specific tasks outlined by this SOP and the CSS SQAPP. It

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

is the responsibility of the LC to communicate with the project personnel and subcontracted laboratory regarding specific analysis objectives and anticipated situations that require any deviation from the CSS SQAPP SOPs. In addition, it is the responsibility of the LC to communicate the need for any deviations from this SOP with the CDM Project Manager, USEPA Region 8 personnel (Remedial Project Manager or Regional Chemist.)

Subcontracted laboratory analysts performing the visual examination are responsible for adhering to the applicable tasks outlined in this SOP and substantiating components of the reference procedures (EPA 1993; NIOSH 1994) with the modifications contained herein.

4.0 EQUIPMENT

- Analytical balance - accurate to 0.01 g, range of 0.01 g to 1000 g (for weighing total sample)
- Analytical balance - accurate to 1 mg (for weighing asbestos)
- Traceable standards - major asbestos types
- Microscope - binocular stereomicroscope, 5-60X approximate magnification
- Microscope - polarized light, binocular or monocular with a cross hair reticle (or functional equivalent) and magnification of at least 8X
 - 10X, 20X, and 40X objectives
 - 360 degree rotatable stage
 - substage condenser with iris diaphragm
 - polarizer and analyzer which can be placed at 90 degrees to one another and calibrated relative to the cross-line reticle in the ocular
 - port for wave plates and compensators
 - wave retardation plate (Red I Compensator) with ~550 nanometer retardation and known slow and fast vibration directions
- Light Sources - incandescent or fluorescent

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

- Tweezers, dissecting needles, scalpels, probes, razor knives, etc. - standard sample manipulation instruments/tools
- Microscope slides and cover slips
- Refractive index liquids
- Pre-tared glassine paper, glass plates, weigh boats, petri dishes, watchglasses, etc. - laboratory sample containers
- HEPA-filtered or Class 1 biohazard hood negative pressure
- Three-ring binder book- binders will contain Microscopic Examination Logbook Sheets (Attachment 1)

5.0 METHOD

Soils from the Libby, Montana site will be dried, sieved, and prepared according to the most recent revision of SOP ISSI-LIBBY-01, Soil Sample Preparation. The coarse fraction of the soil sample is defined as that portion of the sample which does not pass through a 1/4" sieve. The coarse fraction will be weighed, placed in a zip-top plastic bag, and labeled as described in Camp, Dresser, and McKee (CDM) SOP 1-3 (with project-specific modifications). The samples will be packaged and shipped by the soil preparation laboratory as described in CDM SOP 2-1 (with project-specific modifications) and transferred to the laboratory via chain-of-custody procedures described in CDM SOP 1-2 (with project-specific modifications).

The following sections describe the stereomicroscopic and PLM examination. Materials tentatively characterized as asbestos by stereomicroscopy will be isolated and subjected to confirmation by PLM. The mass % of Libby amphibole asbestos, other amphibole asbestos, and chrysotile asbestos in the coarse soil fraction will be calculated from the mass of each asbestos type positively identified by PLM and the original sample weight. Figure 1 provides an overview of the process.

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

5.1 Stereomicroscopic Examination

The laboratory will receive the coarse fraction soil samples from the CDM Soil Preparation Laboratory. The entire sample will be weighed and placed in an appropriate container. The weight of each coarse sample will be recorded, along with the sample identification, on the Microscope Examination Logbook Sheet. The sample will be subject to stereomicroscopic examination and particle segregation as depicted Figure 1. The stereomicroscopic examination to identify and segregate asbestos includes:

- using multiple fields of view over the entire sample
- probing the sample by turning pieces over and breaking clumps where possible
- manipulating the sample using appropriate instruments/tools
- observing homogeneity, texture, friability, color and extent of any observed asbestos in the sample(s)

NOTE: Although the coarse fraction is prepared by sieving with a 1/4" screen, particles smaller than 1/4" may be present in the fraction due to adherence between coarse and fine particles. This may even include some very fine asbestos fibers. Because of the technical difficulty, the analyst should not attempt to physically segregate and weigh particles smaller than about 2-3 mm (1/10 inch). A particle this size is expected to have a mass of about 10-20 mg, which is less than 0.1% of a sample whose total mass is 25 grams. If no particles larger than 2-3 mm are present, this should be noted in the data sheet for each category of asbestos using the following code system:

- ND = No asbestos observed
- Tr = Trace levels of asbestos observed but not quantified

The weight fraction for any asbestos type marked "ND" or "Tr" in a given sample is not calculated and is left blank.

As the sample is examined, the analyst will continue segregation of the sample until the entire coarse soil fraction has been characterized as either "non-asbestos" or "tentatively identified asbestos." The tentatively identified asbestos particles will be examined by PLM, as described below. The stereomicroscopist will initial and date the Microscopy Examination Logbook Sheet.

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

5.2 PLM

The coarse material tentatively identified as asbestos by stereomicroscopic examination will be subject to confirmation using PLM, as described in SOP SRC-LIBBY-03 (Revision 0) ("Analysis of Asbestos Fibers in Soil by Polarized Light Microscopy"). The PLM examination will be used to confirm that the particles tentatively classified as asbestos are actually asbestos, and will be assign each particles to one of three categories:

LA = Libby amphibole
OA = Other amphibole
C = Chrysotile

If OA is observed, the type of OA observed should be noted in the data sheet using the following code system:

- AMOS = Amosite
- ANTH = Anthophyllite
- CROC = Crocidolite
- UNK = Unknown

The total weight of each type of positively identified asbestos (LA, OA, C) will be determined and recorded on the Microscopic Examination Logbook Sheet, along with the analyst's initials and the date of the examination.

6.0 QUALITY ASSURANCE

Laboratories performing the examination must be accredited by NVLAP. "Calibration" should be verifiable for each microscopist in terms of project-specific training and the successful analysis of materials of known asbestos content (NVLAP test samples, in-house standards) similar to those anticipated to be observed in Libby, Montana soils. Additionally, references such as photographs of the asbestos minerals illustrating distinguishing properties should be available benchside during characterization.

Quality control samples as described in ISSI-LIBBY-01 (i.e., preparation duplicates) will not *submitted for the coarse materials samples*. The entire coarse fraction will be subject to examination.

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

7.0 REFERENCES

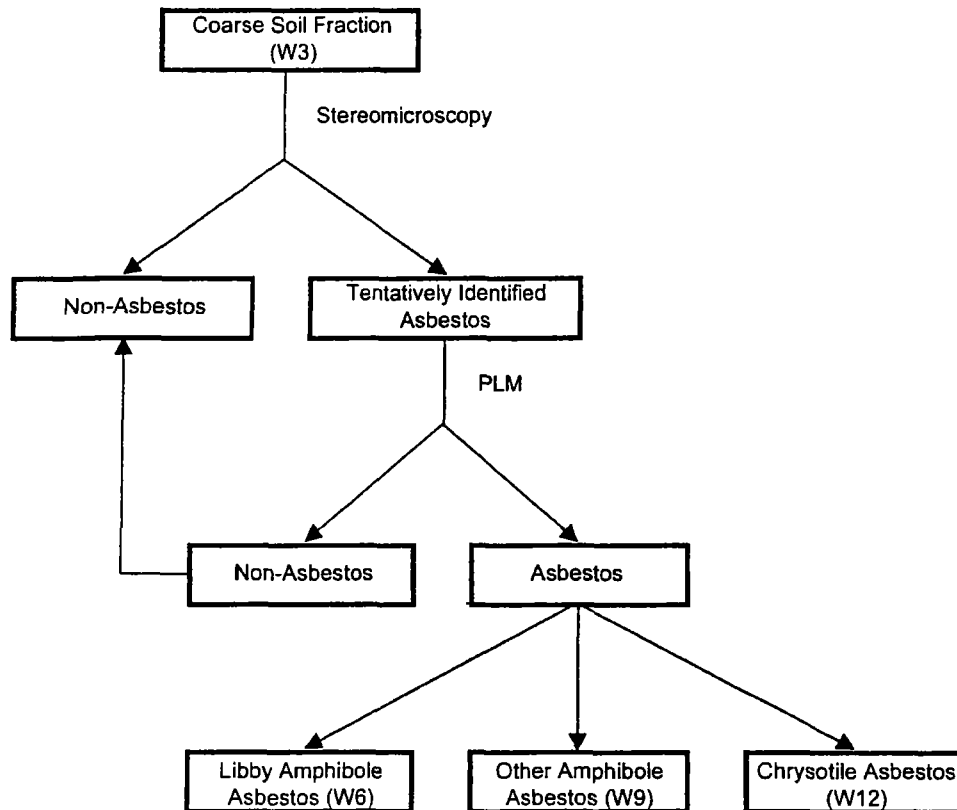
CDM 2002. *Sampling and Analysis Plan, Remedial Investigation, Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4*. 3282-116-PP-SAMP-14187. Camp, Dresser and McKee Denver, Colorado. April.

NIOSH 1994. National Institute of Occupational Safety and Health (NIOSH) Method 9002 *Asbestos (bulk) by PLM*, Issue 2.

USEPA 1993. *Method for Determination of Asbestos in Bulk Building Materials*. 600/R-93/116.

TECHNICAL STANDARD OPERATING PROCEDURE
SRC-LIBBY-01

Figure 1. Overview of Sample Examination Process



W3 = Original coarse soil fraction mass (g)

W6 = If present in measurable quantities, mass (mg) of Libby amphibole

W9 = If present in measurable quantities, mass (mg) of other amphibole

W12 = If present in measurable quantities, mass (mg) of chrysotile

Codes used in the illustration (e.g., W3) correspond to Data Log Sheet

ATTACHMENT 1

MICROSCOPIC EXAMINATION LOGBOOK SHEET

See attached electronic file "SRC-LIBBY-01 Data sheet and EDD v6.xls"

Example hard copy of data entry sheet shown on next page (for illustration purposes only).

ATTACHMENT D
REFERENCES

References

- Camp, Dresser, McKee, 2005. Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4, Libby, Montana. Final Summary Report for the J. Neils Park and Montana State Highway 37 Investigations, Revision I. December 15.
- Maxim, 2006. Work Plan and Cost Estimate for Asbestos Consulting and Industrial Hygiene Services in the Libby Area, Lincoln County, Montana. Task Order No. 605. May 22.
- MDT, 2006a. Task Order No. 605, Request for Asbestos Sampling, Analysis, and Related Industrial Hygiene Services in the Libby Area, Lincoln County, Montana. April 8.
- MDT, 2006b. Task Order No. 605, Request for Asbestos Sampling, Analysis, and Related Industrial Hygiene Services in the Libby Area, Lincoln County, Montana. May 26.